Chapter 5
Robots in Education:
Diverting Force in Emotional Well Being of Students

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ABSTRACT

Over the years, information and communication technology has attained attention in the education sector. Educational robotics as a subfield of ICT has sped up the educational learning in students. Involvement of robots in education has made it more interesting for students. Robotics can be used as motivators for students who don't find traditional learning interesting. For better understanding of STEM (science, technology, engineering, and mathematics) projects, it is recommended that robots must be integrated into school and college education. Students become active as robots enable them to gain knowledge by manipulating technology. Robotics in education is also a boon for teachers as they are not overburden of involving their students in STEM projects. This chapter aims to investigate whether students are feeling the same level of emotional attachment with robots as with humans. By using robots for their social, personal, and education for a long time, they are affecting the emotional wellbeing of the students.

INTRODUCTION

Human-robot interaction develops robots for specific purposes, by fitting them into a specific scenario where they perform tasks according to desired role. As researchers are designing specific tasks robots –in contrary to general-purpose robots – As the technology advances, the advancement in this area become segmented into different fields, such as education, entertainment, and assistive robotics. Which signify that, similar to humans, robots can also play various social roles according to their intended activity? In the recent years, In HRI area there is an undeniable investment in the field of robotic tutors. Different projects are designing robots for children that can assist and support them in their learning acquisitions. To meet the learning means in robots in educational settings, they must be studied within the main area of use, i.e. in kindergartens and schools, by interacting with their users – teachers and students. Despite many research on robots in schools, there is still much to explore, basically in long lasting educational interactions with robots. Usually people behave on the basis of their social roles, which mean that when we know the role of the other person which can decide their interactions with the environment. If we are to designing robots which are operating in a school under long time span, by studying the perception of students by regarding the roles of the robot becomes important, most importantly if they are expecting direct interaction with robot. Here we are focusing on the children and their perceptions towards the expected role of the educational robot.

Interactions with others are the basic part of our lives. The manner we interact with others and show our behavior depends mostly on the role we play and the role we expect from others.

A. Roles and Humans: In the context of human relationships the application of a social role can be an abstract process, by making role detection a difficult human job even in definite contexts. Interpersonal interactions usually provide an important mean for self-regulation, due to the inherent switch over of information. However, our behavior in such interactions are formed and inhibited by the social roles we play, making role inheritance a non-straightforward task. When we depict insights about someone's role, we often fall short in this finding, allow biasing possessions on performance. This occurs because of the sections of roles that we identify in our minds are abstract nodes of relations that confine and strive to arrange precise instance and definite individuals. The process of role played is a vital one as it helps us to understand each other and make inferences about the behaviors, characteristics, feelings and thoughts of others. In the route of assigning roles, "we match up to a newly encounter person with our own conceived philosophy about what other persons are like. This makes task mission dependent on our own personal experiences and also on preceding encounter with others. When we find a competition between

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